

# Impact of institutional methadone maintenance treatment on release outcome

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**I**n January 1998, the Correctional Service of Canada implemented Phase I of an institutional National Methadone Maintenance Treatment (MMT) Program for federal offenders with heroin or other opiate addictions. Phase I was designed to continue methadone treatment that was started in the community, and requires that an offender has recently participated in community MMT in order to be eligible. Phase I of the MMT Program was modified to allow the option of providing MMT to offenders in exceptional circumstances where all available treatments and programs have failed, the health of the offender continues to be seriously compromised by addiction, and there is a dire need for immediate intervention. The goal of the National MMT Program is harm reduction, in order to minimize the adverse physical, psychological, social and criminal effects associated with opioid use.<sup>2</sup> This article presents results of a study examining the effect of institutional MMT participation on post release outcome.

**H**eroin addiction is extremely damaging to the individual and has negative consequences for communities. It can contribute to deterioration of relationships, dependence on a criminal lifestyle to support the addiction, and serious health consequences, including the contraction of HIV and Hepatitis C due to needle sharing. It is therefore essential that addicted individuals receive treatment. One of the most promising treatments for heroin addiction is the use of Methadone Maintenance Treatment (MMT) to reduce withdrawal symptoms and stabilize behaviour. The use of MMT accomplishes this by acting on the same opiate receptors that heroin does, thereby reducing or eliminating withdrawal symptoms, while having a longer duration of action than heroin (24 to 36 hours versus 4 to 6 hours) and not producing the euphoric and sedation effects that heroin does.<sup>3</sup> Therefore, once individuals are maintained on the proper methadone dose, they are functionally normal, and are able to participate in productive activities such as treatment, education and employment.

Use of MMT to treat heroin addiction has been found to be related to decreased intravenous drug use, decreased needle sharing and HIV risk behaviours, decreased criminal activity, increased productive

activities, and increased likelihood of continuing treatment in the community following release.<sup>4</sup>

The study presented in this article examines the outcome following release from prison for offenders who had participated in Phase I MMT while incarcerated, as compared to other heroin addicted offenders who had not participated in MMT. The study examines outcome in terms of readmission to custody following release.

## Current study

### MMT group

The group consists of 303 offenders identified as having received MMT in a federal institution from November 1996 to October 1999. Among these offenders, 62% (187 offenders) were released from custody before May 15, 2000, and these offenders were included in follow-up analyses. Released offenders in this group were, on average, 38 years of age at release, 10% (17) were Aboriginal, and 3% (6) were women.

### Non-MMT group

The Non-MMT group included all offenders who were identified as having a drug addiction and who had at least one positive urinalysis result for opiates or opiates A (heroin metabolites) in random and systematic testing from January 1998 to October 1999. The presence of a drug addiction was confirmed by examining institutional files. This group contained 215 offenders, and approximately 52% (112) were released from custody prior to May 15, 2000. Of this sample of released offenders, 20% (22) were Aboriginal, 6% (7) were women, and averaged of 34 years of age at release.

Measures of outcome including readmission to federal custody, type of revocation, and reoffending were examined. As can be seen in Figure 1, the groups significantly differed in their readmission survival curves. Overall, the MMT group was readmitted to federal custody at a lower rate, and at a slower pace than the Non-MMT group. For example, at approximately 12 months, 59% of the MMT had not been readmitted while only 42% of the Non-MMT group had not been readmitted.

Figure 1

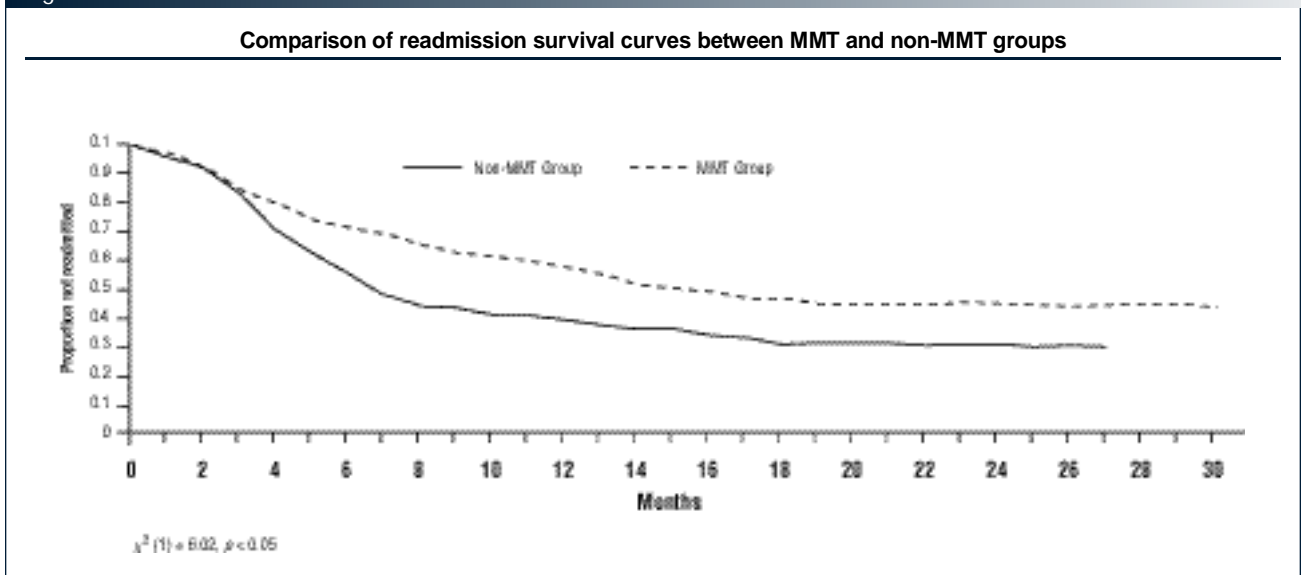


Table 1 examines offender outcome following release in a slightly different manner. Type of outcome for a fixed 6 month period is presented for the 92 Non-MMT offenders and the 154 MMT offenders who had been released and had 6 months available to be readmitted following release. As can be seen, after six months, the MMT group was more likely to not be readmitted (71% versus 56%), less likely to have a revocation without a new offence (17% versus 22%). In addition, the MMT group was less likely to be returned to custody due to new offence (12%\* versus 22%; this includes percentages of both Revocation with New Offence and New Conviction). These general trends were also observed when examining the outcome following a fixed 12-month follow-up period. The results indicate that MMT offenders are less likely to be readmitted, but when they are, it is more likely to be due to a revocation without an offence than due to the commission of a new offence.

The reasons for revoking conditional release are compared for the two groups in Table 2. The Non-MMT group was significantly more likely than the MMT group to have a violation of an abstinence condition due to alcohol use (9% versus 2%), or to be unlawfully at large (UAL) (22% versus 9%). In addition, although not statistically reliable, the Non-MMT group was more likely to have committed a violation of their abstinence condition due to drug use than the MMT group (20% versus 14%). In general, the Non-MMT group was more likely to have more serious forms of revocation such as violations of abstinence conditions, or being unlawfully at large, than the MMT group.

In terms of reoffence, results presented in Figure 2 suggest that there is a difference in the rates of failure with a new offence, but that this difference was not

Table 1

Outcome for 6-month fixed follow-up period			
	MMT group % (n)	Non-MMT group % (n)	$\chi^2$
No Readmission	71 (109)	56 (52)	
Revocation without new offence	17 (26)	22 (20)	7.96*
Revocation with new offence	8 (12)	9 (8)	
New conviction <sup>1</sup>	4 (7)	13 (12)	
Number of cases	154	92	

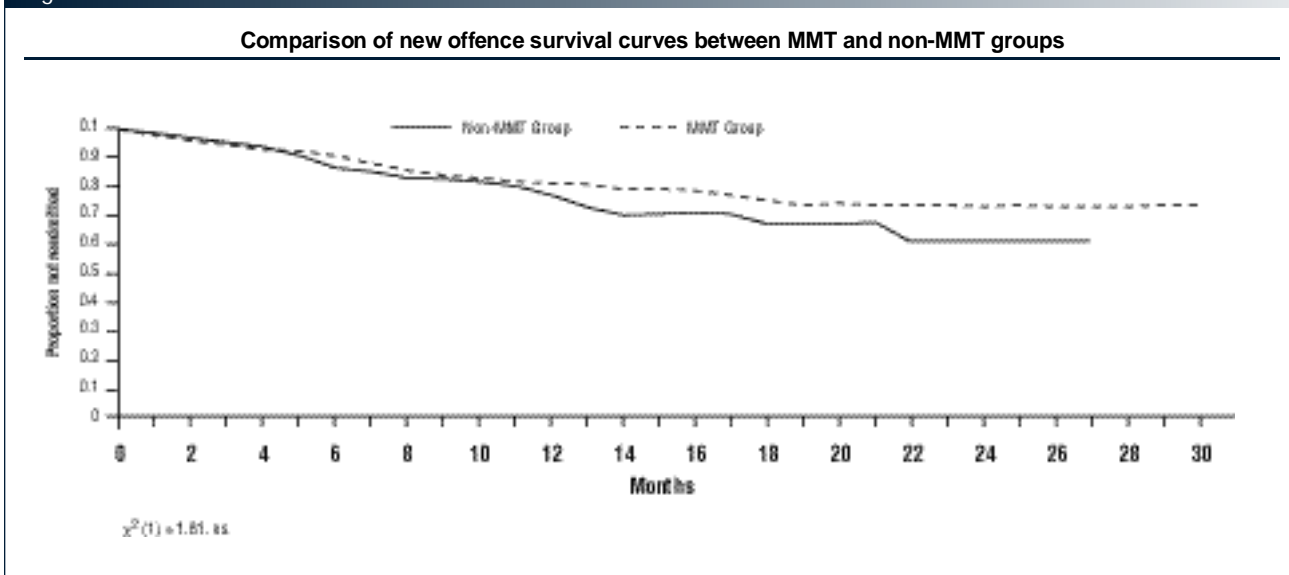
*\*p < 0.05*  
<sup>1</sup> Readmission to a federal institution with a new offence, following the completion of a previous federal sentence.

Table 2

Percentage of released offenders with each type of revocation			
Revocation type	MMT group % (n)	Non-MMT group % (n)	$\chi^2$
Violation of abstinence condition-alcohol	2 (3)	9 (10)	9.04**
Violation of abstinence condition-drugs	14 (26)	20 (23)	2.25
UAL	9 (16)	22 (25)	11.22***
Violation of curfew	2 (4)	3 (3)	0.09
Deterioration of behaviour	3 (6)	4 (4)	0.03
Other violation	5 (9)	5 (6)	0.04
Number of cases	187	112	

*\*p < 0.05    \*\*p < 0.01    \*\*\*p < 0.001*

Figure 2



statistically reliable. At approximately 12 months following release, 76% of the Non-MMT group and 82% of the MMT group had not reoffended. Further analyses revealed that the two groups did not differ significantly in the number and type of new offences committed following release.

### Conclusion

The result of the current study indicate that heroin addicted offenders participating in institutional MMT program had lower and more gradual readmission rates than those who had not participated in MMT. In addition, MMT offenders were less likely to be readmitted due to a technical violation of an abstinence condition, or being unlawfully at large. However, the results did not indicate any meaningful differences in the new offence rates between the two groups. One limitation of the study is that offenders were not monitored in the community to determine if they had continued with MMT. Failure to continue MMT may be associated with increased risk of new offending, but this remains to be studied in a future project.

While this study examines outcome in terms of readmission to custody, future research should examine other pre- and post-release measures. For example, such measures might include degree of intravenous and non-intravenous drug use, treatment participation, health status, productive activities (i.e., employment, education), and criminal behaviour. In addition, work is underway to

determine the feasibility of changing the MMT criteria, which would allow offenders who had not participated in previous MMT to be eligible for consideration for the program. This change will increase the number of offenders eligible for MMT and will require additional research to determine the degree to which institutional MMT participation is beneficial for these offenders and those who met the Phase I criteria examined in the current study. ■

- 1 340 Laurier Avenue West, Ottawa, Ontario K1A 0P9.
- 2 Correctional Service Canada (1999). *National Methadone Maintenance Treatment Program Phase I*. Resource and Information Package, Ottawa, ON.
- 3 O'Brien, R., Cohen, S., Evans, G., and Fine, J. (1992). The encyclopedia of drug abuse (2nd ed.). New York, NY: Facts on File.
- 4 Coid, J., Carvell, A., Kittler, Z., Healey, A., and Henderson, J. (2000). *Opiates, Criminal Behaviour, and Methadone Treatment*. Website: <http://www.homeoffice.gov.uk/rds/index.htm>; see also Dolan, K. A., Wodak, A. D., and Hall, W. D. (1998). Methadone maintenance treatment reduces heroin injection in New South Wales prisons. *Drug and Alcohol Review*, 17, 153-158; Fischer, B., Gliksmann, L., Rehm, J., Daniel, N., and Medved, W. (1999). Comparing opiate users in methadone treatment with untreated opiate users: Results of a follow-up study with a Toronto opiate user cohort. *Canadian Journal of Public Health*, 90, 299-303; Maddux, J. F., and Desmond, D. P. (1997). Outcomes of methadone maintenance 1 year after admission. *Journal of Drug Issues*, 27, 225-238; Magura, S., Rosenblum, A., Lewis, C., and Joseph, H. (1993). The effectiveness of in-jail methadone maintenance. *The Journal of Drug Issues*, 23, 75-99; and see Marsch, L. A. (1998). The efficacy of methadone maintenance interventions in reducing illicit opiate use, HIV risk behavior and criminality: A meta-analysis. *Addiction*, 93, 515-532.